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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,331	11/29/2001	Peter Moffatt	476-2071	4986

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EXAMINER
SPOONER, LAMONT M

ART UNIT	PAPER NUMBER
2654	

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/997,331	MOFFATT ET AL.
	Examiner	**Art Unit**	
	Lamont M. Spooner	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply ba timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failura to reply within tha set or extended period for reply will, by statute, cause tha application to becoma ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 May 2005*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11 and 14-23* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11 and 14-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed 5/10/05 have been fully considered but they are not persuasive.

In response to applicant's arguments, "However, these do not correspond to the four different recordings, and respective locations, now recited in the independent claims." The Examiner fails to locate this limitation in the claims, for example in claim 1, "each of a plurality of said fragments being a *recording* of a spoken alphanumeric character as spoken at a particular location within an utterance", does not require four different recordings, and "said database of fragments comprising, for the same alphanumeric character at least four fragments each being a *recording* of that alphanumeric character as spoken at a *different* location within an utterance", does not require four different recordings.

Claim Objections

2.   Claims 1, 16 and 21 are objected to because of the following informalities: In claim 1, "each of a plurality of said fragments being a recording of a spoken alphanumeric character as spoken at a particular location" and "at least four fragments each being a recording of that alphanumeric character as spoken at a different location" cause ambiguity with "the locations being", wherein the locations may be the same location for each of a plurality of fragments in a particular location, or each of different locations. The Examiner is unable to discern a difference within the claim. In order to

expedite prosecution, the Examiner has interpreted the locations to be referring to the

particular location. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1, 2, 4, 5, 7, 9-11, 14-17, 21- 23 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Hirota (U.S. Patent No. 6,188,977 Feb. 13, 2001) in view of

Busardo (U.S. Patent No. 6,148,285 Nov. 14, 2000), and further in view of Sakamoto

(US Patent No. 5,027,409 Jun. 25, 1991).

Hirota, Busardo and Sakamoto are analogous art in that they are of the

information synthesis field.

As per **claims 1, 16, 17, 21 and 22**, Hirota discloses a method of playing

recordings of spoken alphanumeric characters in sequences comprising:

receiving a sequence of alphanumeric characters to be played (Fig. 7, C.5.lines

1-4, Fig. 1 item 107 "Input Unit"-Natural Language Sentence)

accessing a template (Fig. 4-the template is the model that recognizes and

matches a pattern, C.2.lines 3, 4) comprising a sequence of fields (Fig 4. "<integer>,

<fraction>"-it would have been obvious, and well known that the information entered into

the pattern matching area is called a field), each field representing part of a sequence of

alphanumeric characters (C.2.line 1-"NL550" represents a string of alphanumeric

characters) and said template comprising information about the manner in which a

sequence of alphanumeric characters is to be played such that in use intonation is

produced (C.6.lines 42-47-the sequence is played in a monotone "manner").

accessing a database of fragments (C.6.line 47-to read the alphanumeric

character recorded fragments as stated "en el faiv" it is necessary to access a database

which contain these specified fragments, C.6.lines 15-17-wherein the notation non-

specific dictionary is the database containing the fragments or pronunciation

information), as spoken at a particular location within an utterance (C.6.lines 45-47-the

location being one character read after the other in the utterance)

for each character in said received sequence of alphanumeric characters

(C.6.line 42 "NL550" is the sequence of characters), selecting a fragment on the basis

of the accessed template (C.6.lines 43-47- "en el faiv faiv ou" are selected based on the

accessed template in the template/dictionary database); and

passing said selected fragments to a player and playing the fragments (C.6.lines

45, 46).

Hirota does not disclose:

each of a plurality of said fragments being a recording of a spoken alphanumeric

character as spoken at a particular location within an utterance;

However, Busardo teaches recording of a spoken set of fragments (C.3.lines 13-

16-"voice actor" records the fragments into a database). Therefore it would have been

obvious, at the time of the invention, to one ordinarily skilled in the art to combine Hirota

with Busardo by having the fragments recorded by a voice talent. The motivation would

have been to have a database of spoken recorded sounds that could be played once

related to the input character sequence which would render a more human like play

instead of the well known robotic sounding play.

Hirota in view of Busardo does not disclose:

b) intonation comprising rise and fall in pitch is produced.

c) said database of fragments comprising, for the same alphanumeric character

at least four fragments each being a recording of that alphanumeric character as

spoken at a different location within an utterance, where a subgroup is a part of an

alphanumeric character sequence, the locations being: start of a subgroup; middle of a

subgroup; end of a subgroup; and end of an utterance.

However, Sakamoto teaches having a database (Fig. 1 "Voice-Data Memory

Group) for storing different intonations for the same character as spoken at a different

location within an utterance (C.3.lines 56-67), further Sakamoto teaches having a

template (table in a preset format, C.5.line 48-67) comprising information about the

manner in which a sequence of characters is to be played such that in use intonation

comprising rise and fall in pitch is produced. (C.3.lines 56-68, C.5.lines 48-68), and

database of fragments comprising, for the same alphanumeric character at least

four fragments each being a recording of that alphanumeric character as spoken at a

different location within an utterance, where a subgroup is a part of an alphanumeric

character sequence, the locations being: start of a subgroup; middle of a subgroup; end

of a subgroup; and end of an utterance.(C.3.line 56-C4.line 24-his first as vier-1 as the

start of a subgroup, his vier-2 used to indicate minutes as the middle or end of a

subgroup and end of an utterance, his vier-1, used to indicated minutes as the middle or

end of a subgroup and end of an utterance, and his vier-2 used to indicate hours as the

start of a subgroup, interpreted as four fragments, each a recording of that

alphanumeric character-vier, as spoken at a different location within an utterance...).

Therefore, at the time of the invention, it would have been obvious to one

ordinarily skilled in the art to modify Hirota and Busardo with Sakamoto by having rising

and falling intonation patterns of fragments in place of monotone intonation template

fragment pattern sequence playback. The motivation for doing so would have been to

accommodate differences in meaning due to tonal changes in a word as a direct result

of the word in sequence (C.3.line 56-C.4.line24) and to provide an intonation changes

depending on the block placement of the fragment in order to improve voice data output

(Sakamoto C.2.lines 34, 35), which would provide the benefit contributing concise voice

data due to tone verification of output (C.1.lines 33, 34, 35) in multiple situations

(C.3.lines 50-55).

As per **claim 2**, Hirota, Busardo and Sakamoto disclose all of the limitations of

claim 1, upon which claim 2 depends. Hirota further discloses:

said accessed template (Fig. 4 "<NL_PRODUCT>") is selected from a database

of templates (Fig. 4) on the basis of the received sequence of alphanumeric characters

(C.5.lines 1-4).

As per **claim 4**, Hirota, Busardo and Sakamoto disclose all of the limitations of

claim 2, upon which claim 4 depends. Hirota further discloses:

at least some of the templates in said database contain specified alphanumeric characters in at least some of the template fields (Fig. 4 "<NL_PRODUCT>"-the specified characters in this case are the "N" and "L", it would be obvious to have a numeric specified character if desired).

As per **claim 5**, Hirota, Busardo and Sakamoto disclose all of the limitations of claim 4, upon which claim 5 depends. Hirota further discloses:

said accessed template is selected from the database of templates (Fig. 4) by matching at least some of the received sequence of alphanumeric characters with specified alphanumeric characters in the template fields (C.2.lines 1-4, Fig. 4 "<NL_PRODUCT>" is matched with C.6.line 42 "NL550").

As per **claim 7**, Hirota, Busardo and Sakamoto disclose all of the limitations of claim 2, upon which claim 7 depends. Hirota further discloses:

said database of templates (Fig. 4, C.4.lines 22-24) comprises sets of templates each set being suitable for use with a particular type of alphanumeric character sequence (Fig. 4, C.4.lines 33-38-the types of sequences suitable are integer, fraction, date, onomatopoetic, etc.).

As per **claim 9**, Hirota, Busardo and Sakamoto disclose all of the limitations of claim 1, upon which claim 9 depends. Hirota further discloses:

said receiving a sequence of alphanumeric characters further comprises receiving values of one or more parameters (C.4.lines 45-47-the parameters being the entry must be between greater than 1 and equal to or smaller than 12).

As per **claim 10**, Hirota, Busardo and Sakamoto disclose all of the limitations of claim 9, upon which claim 10 depends. Hirota further discloses:

said parameters specifies a type of alphanumeric character sequence (C.4.lines 33, 42-44-the specified sequence is month, day, year)..

As per **claim 11**, Hirota, Busardo and Sakamoto disclose all of the limitations of claim 1, upon which claim 11 depends. Hirota further discloses:

said alphanumeric character sequence is selected from a date (C.6.lines 20-24).

As per **claim 14**, Hirota, Busardo and Sakamoto disclose all of the limitations of claim 2, upon which claim 14 depends. Hirota further discloses:

if said selected template is incompatible with said received alphanumeric data sequence, then said template is adapted to be compatible with the received alphanumeric data sequence (C.6.lines 62-66-the addition to the template database would then adapt the template to be compatible).

As per **claim 15**, Hirota, Busardo and Sakamoto disclose all of the limitations of claim 1, upon which claim 15 depends. Hirota in view of Sakamoto does not disclose:

the alphanumeric character sequence is received, the method of claim 1 completed and the sequence played in real time

However, Busardo teaches the synthesis of speech is completed in real time (C.4.lines 5-7). Therefore it would have been obvious, at the time of the invention to one ordinarily skilled in the art to modify Hirota, Sakamoto with Busardo by playing a sequence in real time. The motivation for doing so would have been to have the desired speech information played in real-time due to the alphanumeric data entry which would

enable one to compete with the high standards of real-time information processing instead of having a response at a later time.

As per **claim 23**, Hirota, Busardo and Sakamoto disclose all of the limitations of claim 16, upon which claim 23 depends. Hirota in view of Sakamoto does not disclose:

an automated directory number enquiry system comprising an apparatus as claimed in claim 16.

However, Busardo teaches having an automated directory number system (C.4.lines 5-7). Therefore it would have been obvious, at the time of the invention, to one ordinarily skilled in the art to modify Hirota, Sakamoto with Busardo by having an automated directory number enquiry system. The motivation for doing so would have been to enquire a number from a directory and have the information processed and synthesized automatically, without having to manually instruct the system step by step for the acquisition of the desired information.

5.   Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirota in view of Busardo, in further view of Sakamoto, and in further view of Pirz et al. (U.S. Patent RE 32,012 Oct. 22, 1985).

Hirota, Busardo, Sakamoto and Pirz et al. are analogous art because they are of the speech recognition field.

As per **claim 3**, Hirota and Busardo disclose all of the limitations of claim 2, upon which claim 3 depends. Hirota in view of Busardo, in further view of Sakamoto do not disclose:

the templates in said database are prioritized.

However, Pirz et al. teaches prioritizing (ordering) templates. Therefore it would

have been obvious, at the time of the invention, to one ordinarily skilled in the art to

modify Hirota, Busardo, Sakamoto with Pirz et al. by prioritizing the templates in the

database. The motivation for doing so would have been to process information into

voiced representations and having the templates that correspond to the characters

prioritized for the purpose of locating frequently used templates faster as they could

have a higher priority than infrequently used templates.

As per **claim 6**, Hirota and Busardo disclose all of the limitations of claim 3, upon

which claim 6 depends. Hirota further discloses:

said accessed template is selected from the database of templates on the basis

of the received sequence of alphanumeric characters (C.5.lines 38-41).

Hirota in view of Busardo, in further view of Sakamoto do not disclose:

said accessed template is selected from the database of templates on the basis

of the priority of the templates as well as on the basis of the received sequence of

alphanumeric characters.

However, Pirz et al. teaches selecting the template on the basis of its priority

(C.4.lines 51-54, 65-68). Therefore it would have been obvious, at the time of the

invention, to one ordinarily skilled in the art to modify Hirota, Busardo, Sakamoto with

Pirz et al. by selecting templates based on priority. The motivation for doing so would

have been to process information into voiced representations and having the templates

that correspond to the characters selected based on prioritization as well as the order of

characters received, for the purpose of locating frequently used templates faster as they

could have a higher priority than infrequently used templates and having a filtering

criteria for the reception of the characters so that desired templates will be accessed

that better accommodate the sequence of alphanumeric characters.

6.   Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirota in

view of Busardo, in further view of Sakamoto, and in further view of Huang et al. (U.S.

Patent No. 5,913,193 Jun. 15, 1999).

Hirota, Busardo, Sakamoto and Huang et al. are analogous art because they are

of the information synthesis field.

As per **claim 8**, Hirota, Busardo, and Sakamoto disclose all of the limitations of

claim 1, upon which claim 8 depends. Hirota in view of Busardo and in further view of

Sakamoto do not disclose:

said template information about the manner in which a sequence of

alphanumeric characters is to be played comprises information about pauses.

However, Huang et al. teaches having information about the manner in which a

string is to be played contains information about pauses (C.4.lines 39-41). Therefore it

would have been obvious, at the time of the invention, to one ordinarily skilled in the art

to modify Hirota, Busardo, Sakamoto with Huang et al. by incorporating information

about pauses into the template. The motivation for doing so would have been to attempt

to eliminate the effect of having two different words or for example a proper name and a

middle initial, pronounced together as one word due to insufficient pause information.

7.   Claims 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Hirota in view of Busardo, in further view of Sakamoto, and in further view of

Ronca et al. (U.S. Patent No. 6,546,366 filed Feb.26, 1999).

Hirota, Busardo, Sakamoto, and Ronca et al. are analogous art because they are

of the text to speech conversion field.

As per **claim 18**, Hirota, Busardo and Sakamoto disclose all of the limitations of

claim 16, upon which claim 18 depends. Hirota in view of Busardo and in further view of

Sakamoto do not disclose:

said player is provided by an interactive voice response (IVR) system.

However, Ronca et al. teaches having the messaging accessible by an IVR

system (C.4.lines 61-66). Therefore it would have been obvious, at the time of the

invention, to one ordinarily skilled in the art to modify Hirota, Busardo, Sakamoto, with

Ronca et al. by having a player provided by an IVR. The motivation would have been to

convert text to speech and allow an interactive voice response system control the player

which will enable an user friendly and easy method of communication by the user with

the player.

As per **claim 19**, Hirota, Busardo and Sakamoto disclose all of the limitations of

claim 16, upon which claim 19 depends. Hirota in view of Busardo and in further view of

Sakamoto do not disclose:

said processor is integral with an IVR system.

However, Ronca et al. teaches integrating the processing systems (of voice

messaging and text messaging) with an IVR System (C.1.lines 60-64, C.4.lines 58-60,

63-66). Therefore it would have been obvious, at the time of the invention, to one ordinarily skilled in the art to modify Hirota, Busardo, Sakamoto with Ronca et al. by integrated the processor with an IVR system. The motivation for doing so would have been to allow the IVR system to integrate the processing of the information received and synthesized for the purpose of allowing the IVR to encompass or be an integral part of the synthesis while interacting with the user via voice response.

Conclusion

8.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lamont M. Spooner whose telephone number is 571/272-7613. The examiner can normally be reached on 8:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Richemond Dorvil can be reached on 571/272-7602. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

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Business Center (EBC) at 866-217-9197 (toll-free).

RICHEMOND DORVIL
JPERVISORY PATENT EXAMINER

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10/19/05